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ABSTRACT

Graduate education is in an accelerated state of change. Discussed is its responsiveness or unresponsiveness to the forces of change. After contrasting traditional and alternative forms of graduate education, recommendations are made that: (1) graduate institutions and departments should periodically redefine their goals and objectives and make them public; (2) graduate institutions should reexamine their policies and procedures so that they are consistent with their goals and objectives and so that they become more flexible and more responsive to both student and societal needs; (3) graduate faculties should expect to change their practices regularly to be responsive to what research evidence shows to be desirable with respect to teaching and learning; (4) graduate faculties should reevaluate their systems so that the focus is on learning and the output product rather than grades, credits, and degrees; (5) graduate degree programs should contain a creative component that gives priority to student interests and needs as contrasted to institutional and/or professorial interests and needs; and (6) graduate education whether traditional or nontraditional should maintain a high quality standard for the levels of advancement and maturity that characterize graduate students. Experience suggests that the outlook for responsiveness to these and other recommendations is not optimistic. (Author/KE)

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Improving Graduate Education Through Alternative Approaches

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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American Council on Industrial Arts Teacher Education
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Tuesday, April 20, 1976

Des Moines, Iowa

HE 008 262

ACIATE T-10:30-3 Special Interest Session - Alternative Forms of Graduate Study in Industrial Arts Wright-1

"Improving Graduate Education Through Alternative Approaches"

Introduction

In the sixties, two developments in education significantly influenced the growth of alternative forms of graduate study. Bruner (1960) defended the thesis that "the foundations of any subject may be taught to anybody at any age in some form." (p. 12). This was further enlarged upon by Bloom (1968) who reported that "We are convinced that the grade of A as an index of mastery of a subject can, under appropriate conditions, be achieved by up to 95 percent of the students in a class." (p. 2)

During this period it will be recalled that there was tremendous growth in graduate education. Non-traditional students in larger numbers began seeking graduate education. Many of these had already learned and accomplished through the "school of life" but now wished to be recognized for these accomplishments by the award of the more formal graduate degrees. Thus, change in graduate education was needed. The question of how change may be brought about within the graduate establishment is, to say the least, worthy of study.

The logical way to bring about change would seem to be through planned, systematic, continuous evaluation out of which a general responsiveness to the forces that suggest the need for change could emerge. This is how changes have been brought about in graduate education over the years.

But the rate of change is accelerating and many say that graduate education is no longer responsive to the forces of change that are bearing upon it. Alternative forms have emerged and we are wondering what to do about it. It would seem that these alternative forms have developed because the existing forms could not or would not be responsive to the forces that caused their

development. Thus a parallel and competing system has developed. And we in graduate education are scurrying around first to try to identify what this new thing is, secondly wondering how we can stop its growth which is threatening our traditional system and occasionally, in a more positive vein, wondering what there is in the alternative formats that can be used to modify and strengthen the traditional system. It is this latter question that I discuss today: How to Improve Graduate Education Through Alternative Approaches.

Graduate Education in Operational Practice

In practice, graduate education is that set of experiences and their administrative and organizational surroundings available to students through graduate schools and colleges.

This does not imply accreditation although most sets of experiences are accredited.

It does not imply residency although most have a residence requirement.

It does not imply degree programs although most sets of experiences were developed to be a part of degree programs.

Rogers (1969) lists ten "implicit assumptions" relative to graduate programs in psychology and suggests that we may see relationships to various graduate departments with which we are familiar

1. The student cannot be trusted to pursue his own scientific and professional training. (p. 171)
2. Ability to pass examinations is the best criterion for student selection and for judging professional promise. (p. 173)
3. Evaluation is education; education is evaluation. (p. 134)
4. Presentation equals learning: What is presented in the lecture is what the student learns. (p. 177)
5. Knowledge is the accumulation of brick upon brick of content and information. (p. 178)

6. The truths of psychology are known. (p. 179)

7. Method is science. (p. 180)

8. Creative scientists develop from passive learners. (p. 180)

9. 'Weeding out' a majority of the students is a satisfactory method of producing scientists and clinicians. (p. 182)

10. Students are best regarded as manipulable objects, not as persons. (p. 183)

If Roger's assumptions are true we have reason to be alarmed.

Briefly, I have contrasted the traditional with alternative forms in a series of fourteen points which may be seen in Table 1. These will form a basis for the recommendations I will make.

TABLE I

THE TEACHING-LEARNING PROCESS - CONTRASTING THE TRADITIONAL WITH ALTERNATIVE FORMS

Traditional Forms	Alternative Forms
1. Teaching is what the teacher does.	1. The teacher facilitates learning.
2. The teacher has the responsibility for the students' learning.	2. The student is responsible for his own learning.
3. Talking is teaching; listening is learning.	3. Learning is an action which can only be experienced by the learner.
4. Emphasis is on teaching the course content.	4. Emphasis is on development of competencies.
5. Content is uniformly prescribed.	5. Content is selected by students to meet varying needs.
6. Emphasis is placed on institutional convenience and traditional practice.	6. Emphasis is placed on student needs.
7. Uniform time in the classroom assures uniform learning.	7. Progress is demonstrated by achievement, not by a time standard. Accelerated study is encouraged.
8. Small class sections promote greater learning than large class sections.	8. Its not the size of the class - but what happens to students that promotes learning.
9. Minimum residence is required.	9. What has been learned is more important than how or where it was learned.
10. Primary concern is for the young degree seeker.	10. Primary concern is with learners of any age whether or not they seek degrees.
11. Emphasis is on cumulating credits.	11. Emphasis is on developing competencies.
12. Validation is through formal institutional approval before performance in the "real world."	12. Validation may take place in the "real world" using "real world" problems as the validating mechanisms.
13. Evaluation is based on quizzes and examinations.	13. Evaluation is based on demonstrating competence to a pre-specified level.
14. The pay-off is a grade and usually a degree.	14. The pay-off is in becoming competent in order to function successfully in a pre-specified role.

More

Panel on Alternative Approaches to Graduate Education

Growing out of the need for controlling new forces in graduate education a sixteen-member panel sponsored by the Council of Graduate Schools and the Graduate Record Examination Board was commissioned to make recommendations on the subject of Alternative Approaches to Graduate Education. Permission has been granted to distribute a copy of the 26 recommendations made by this Panel to you. They were published in December of 1973 so they have been available just over two years.

I would commend the entire report called Scholarship and Society to those who may want the rationale and additional detail of which it consists.

In the interest of time we will direct our attention to only what the panel saw as three major issues confronting graduate education:

- Democratization as contrasted with preservation of value.
- Public involvement as contrasted with mastery of scholarship.
- Diversity of graduate students and institutions as contrasted with orderliness and singularity of focus.

Its twenty-six issues appended to this report speak to these concerns.

What Improvements are Suggested for Graduate Education in Industrial Arts?

One has an uncomfortable sensation as this portion of the subject is addressed. The nature of the "advice" that has been synthesized from my experiences and study is not appropriate to every graduate school and department. Obviously, I cannot speak with the authority that each of you can for your own academic environment. I shall simply suggest "If the shoe fits, put it on" and, "Let the chips fall where they may."

I would now like to consider six areas within which attention should be given toward the end of improving graduate education. These comments are believed to be generalizable to other areas of graduate study than industrial arts.

RECOMMENDATION #1

Graduate institutions and departments should periodically re-define their goals and objectives and make them public. The pressures for alternative approaches to graduate education are forcing institutions to reexamine their goals and purposes for graduate education. We no longer (if we ever did) have only one viable approach to graduate education; namely, producing research scholars. It would seem logical that a differentiation of purpose among institutions offering graduate work would permit both meeting the varied demands society now places upon graduate institutions and providing efficient, manageable programs within them.

Graduate programs are no different from other programs in that some statement of purpose is needed so that decisions can be related to such a purpose. Many graduate programs were developed and implemented in the 50s and 60s, especially within institutions that were formerly teacher education institutions. This was a period of much rapid growth and expansion. Dollars were more free than they are now or are likely to be in the foreseeable future. Over-expansion may have been a tendency. Re-definition of goals and objectives is in order.

RECOMMENDATION #2

Graduate institutions and departments should re-examine their policies and procedures so that they are consistent with their goals and objectives and so that they become more flexible and more responsive to both student and societal needs. Alternative approaches to graduate education are forcing us to examine the level of flexibility in our programs to meet the needs of new and non-traditional students. Traditional graduate education with all too few exceptions can only be characterized as rigid.

Traditional graduate education tends to emphasize time and space. One hardly needs to illustrate the point. Do you penalize students for failure to attend class? Do you have an institutional policy with respect to attendance? Why does an undergraduate degree require 4 years of study? Why does a master's degree require 30 semester credits of study? Why does doctoral work tend to require nominally three years of study beyond the baccalaureate degree?

The Carnegie Commission (1971) recommended that the M.D. be awarded for three years of study beyond the baccalaureate degree and that "the length of time spent in undergraduate college education can be reduced roughly by one-fourth without sacrificing educational quality." (p.1)

Graduate Colleges are not only rigid for graduate students, but also force rigidity in undergraduate programs.

Our programs can be made more flexible and attractive to students. This can be done with no reduction in quality of programs.

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RECOMMENDATION #3

Graduate faculties should expect to change their practices regularly to be responsive to what research evidence shows to be desirable with respect to teaching and learning.

There are two inter-related differentials between graduate and undergraduate education. The first is that in undergraduate education, the students are younger and therefore less experienced than graduate students. The second is that graduate students have, for the most part, successfully earned at least one 4-year undergraduate degree. It would seem that any other differences are designed and probably should be derived from our knowledge of what is appropriate for a graduate student population each of whom has at least one four-year baccalaureate degree and each of whom is presumably both older and somewhat more mature than the undergraduate student.

The independence of approach, the closeness to faculty, the interaction with peers, the work at the synthesis and evaluation levels are not only appropriate to graduate education. However, they are appropriate to graduate education and to the extent that it fails to build upon these levels it is falling far short of its potential.

Graduate education would be much improved by examining our practices in teaching and learning which seem to be alternatives to the traditional and by adopting those for which positive research evidence is available. Reference is made here to the fourteen points previously presented as alternatives to the traditional in Table 1.

RECOMMENDATION #4

Graduate faculties should re-evaluate their evaluation systems so that the focus is on learning and the output product rather than grades, credits, and degrees.

The evaluation methods used, control students' attitudes and activities a great deal more than many of us may realize.

Andrews (1973) discusses traditional evaluation. Although he is discussing evaluation at the undergraduate level, his comments are just as meaningful in criticizing graduate level evaluation using the traditional system:

> The epitome of quantizing the unquantizable is a grade point average calculated to 3 or 4 or even 5 "significant" figures. It would be ridiculous if it were not so serious. It fixates students on their grades instead of on their learning, it sets students into competition rather than cooperation, it fosters cheating, it restricts the nature of course goals and formats, it facilitates stereotyping of students, and the arbitrary but important distinction between one grade and another introduces an unnecessary element of anxiety into an already anxious student life. It is an absurd and socially dangerous authoritarian notion that experts know the truth and that their evaluations of people's work are objectively valid. All the available evidence, study after study, suggests that grades are worthless in predicting success in real life, regardless of the field or career or the means of measuring success. Of course, grade point averages make the job of selecting one person out of a group, which should be difficult, easy. Grade points fit nicely into electronic computers. (p.31)

Actually, evaluation ought to be done primarily to determine competence. It is a terrible waste of time to admit carefully selected students into graduate programs and then to weed goodly numbers out. More time might well be spent on selection and then the faculty should develop an attitude of serving students to the end of helping them to succeed. Examinations should be for diagnostic purposes and should be repeated if necessary. This in no way should be viewed as lowering standards. It should be viewed as a humane way to

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maintain or even raise standards. Mastery as a concept of performance is certainly an alternative with much promise for graduate education.

Our institution, on an experimental basis, has in place an alternative grading system which is designed to place the emphasis on performance levels.

The range from low to high and the definitions of developmental levels follow:

Lowest - Developmental Level 4: Can perform with supervision and assistance. Development is at the level of knowledge/awareness.

Developmental Level 3: Periodic assistance and/or supervision required.

Developmental Level 2: Performance without supervision, and with initiative and adaptability to related areas.

Highest - Developmental Level 1: Qualified to instruct or lead others; to combine with related competencies to develop original problems or solutions.

RECOMMENDATION #5

Graduate degree programs should contain a creative component which gives priority to student interests and needs as contrasted to institutional and/or professor interest and needs.

It would seem to be a mistake not to have a creative component which causes students to identify the experience, clearly delinate what it is, plan for it, collect data, analyze, organize, synthesize and report on the experience in writing. Students should be required to demonstrate entry-level competencies within such a component at the master's degree level. At advanced graduate degree levels additional experiences should provide for the development of higher competency levels appropriate to older and more mature scholars. The rigidity now imposed in many graduate institutions might be softened to focus on student interests rather than institutional and faculty interests. This, it would seem, could easily be done without lowering standards.

Eckert (1974) in addressing the Midwestern Association of Graduate Schools suggested that:

> Graduate faculty members in education must become better role models if they wish to encourage habits of inquiry and discovery on student's part. (p. 18)

The role-model may be our key to the teaching of the affective domain in graduate education. On the assumption that the on-campus university professor is the best role model, this augers against external degrees and no residence requirements.

Working with a professor who is in the midst of a writing project or other professional service teaches one some things about what that experience requires for example:

1. That almost nothing is written; it is re-written
2. There is no short cut through the preparation, research, and study required for developing a scholarly paper.
3. The only way to publish is to place priority on writing.
4. The results of publication are professionally rewarding.
5. The preparation of publications strengthen those who prepare them.
6. Research and study can be fun.
7. Those who publish gain an increased level of visibility and usually respect.
8. Advice of those who publish is sought.
9. Committee service provides for inter-action with ones colleagues.

RECOMMENDATION #6

Graduate education whether traditional or non-traditional should maintain a high quality standard appropriate for the levels of advancement and maturity that characterize graduate students.

The fact that alternative forms of graduate education have sprung up does not in-and-of-itself mean that quality has or will suffer. The natural problem with the traditionalist is that alternative forms to the traditional are threatening. An easy way to attack is to express the fear of lowering standards. Quality is as important for alternative forms of graduate education as for traditional forms.

The Committee on Post Baccalaureate Experiences of the Michigan Council of Graduate Deans (1975) has addressed the question of quality in graduate education:

> Graduate study means advanced, intensive, purposeful study. Accordingly, in order for a learning experience to be valid and creditable as graduate education, either as an entity unto itself or as a component of a degree program it should at least display these characteristics:
>
> 1. Subject matter should be at a level which reflects and builds upon the knowledge and intellectual maturity a capable student acquires during the undergraduate years.
> 2. The experience should demand that students inquire searchingly and apply themselves fully.
> 3. Students should be in close and frequent contact with experienced scholar-teachers. This normally requires classes of a size that facilitates interaction between the student and the professor as well as among the students themselves.
> 4. The experience should be of such duration that there is time for reflection, absorption and the emergence of independence and self-confidence.
> 5. Resources and environment should be sufficient to promote learning and meet educational objectives.
> 6. Provisions should exist for evaluation of student performance to an extent that the students and their teachers can be secure in the worth of their accomplishments.

If the quality standards suggested by the Michigan Council of Graduate

Deans were to be followed for both traditional and alternative graduate education, we could as easily lump the two categories together and do what is best for graduate students without worrying about whether it is an alternative form.

It is not the credits, nor the years in school, nor the amount of transfer credits, nor the degrees held that are important. What is important is how effective graduates will be in the work-roles and life-roles for which their graduate study has prepared them. Quality toward this end should be among our central concerns.

What are the chances that Graduate Education will be responsive to these and other recommendations?

Past experiences would not suggest that we be terribly optimistic. What I predict is that alternative forms will continue to exist and will, in fact, flourish because traditional programs operated by traditional professors will resist change vigoriously.

Hefferline (1969) has pointed out the problem:

> Traditionalists, of course, have viewed such changes in higher education as debasements - leading, over the years, to humanism, science, professionalism, utility, or - worse yet - popularization. Could the B.A. or Ph.D. degrees remain pure, unsullied, and "rigorus" if the requirements for these degrees were altered? Should job retraining be offered in the groves of academe, or be left to industry, the job corps, and parliamentary services? Should students with 'non-standard' backgrounds be allowed to enroll? Dare the universities undertake action projects on urban problems? Should the colleges risk corruption by trying to educate tne masses? (p. 4-5)

Hefferline (1969) has gone on to suggest why it is so difficult for organizations to change. He lists five reasons:

1. Organizations are inherently passive (p. 10)
2. Voluntary organizations attract members who agree with their activities (p. 10)
3. Organizations tend toward institutionalization and ritualism (p. 11)
4. Organizations that are livelihoods for people tend to come to exist only as livelihoods for there people. (p. 12)
5. Maintenance of institutional effectiveness or achievement (such as student's learning) is only one problem that organizations must face in order to survive. Other problems may take precedence over it. (p. 12)

Academic institutions appear to have not only the above problems but according to Hefferlin (1969) have these problems as well:

1. Their purposes and support are basically conservative. (p. 13)
2. The educational system is vertically fragmented (p. 13)
3. Within higher education, institutional reputation is not based on innovation. (p. 14)

4. Faculty members have observed their vocation for years as students before joining it. (p. 14)
5. The idiology of the academic profession treats professors as independent professionals. (p. 15)
6. Academics are skeptical about the idea of efficiency in academic life. (p. 15)
7. Academic institutions are deliberately structured to resist precipitant change. (p. 16)

As has been pointed out, graduate education does not mean the same thing to each of us. Our institutions cannot, indeed they should not, all attempt to be research oriented institutions. Neither should we all attempt only to upgrade practitioners in the professions nor should we attempt only to be responsive to the needs of non-traditional students.

It would seem that what is needed is continued study and examination of what graduate education is, of what our institution is capable and to what graduate work can our faculty be committed. With such a study within each of our institutions we can each define what graduate education is for us, we can state this clearly and having done this, we can probably do it well. For any given institution without having first decided on and subsequently reviewing the decision about what graduate education is for that institution, graduate work is likely to drift like a ship without a rudder, never making progress toward any particular goal and certainly making it difficult for making decisions since there is no directional basis upon which decisions can be made. The task seems clear. We can not fail to define and re-define our purposes. Graduate education can be improved by selecting manageable portions of graduate education to which our institutional attention can then be directed.

What are the chances that change can be brought about in our Graduate Schools and Colleges? It's really hard to say. But I know one thing. It depends on me and it depends on you. If we marshal our forces to meet

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existing and future needs, we have some chance. We really don't have much choice. It is a perpetual challenge which will exist throughout our professional life times. If we really are professionals we will rise to the challenge.

~~End~~

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MORE

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RECOMMENDATIONS OF THE PANEL ON ALTERNATE APPROACHES TO GRADUATE EDUCATION*

TOPIC 1: Clarification of Mission among Graduate Institutions

1. Graduate institutions and programs should undertake now to arrive at publicly articulated statements of their goals and functions. The state- should reflect: (a) awareness of existing departmental strengths and weaknesses, and of the goals and functions of neighboring institutions of advanced education; (b) the results of intensive faculty-administrative consideration of possible new directions for institutions that could assure them a significant identity related to their major resources.

2. Support should be sought for the creation of a commission to develop alternative standards of evaluation for graduate institutions not totally oriented to the standard of research eminence, and to apply these standards in assessing those institutions that want program evaluation.

3. The major comprehensive universities in a single geographic area, working with a state board of education or a regional agency, should attempt to clarify mission and function among graduate institutions in that particular area, and should, in addition, propose a blueprint for cooperative relationships among all the institutions in question.

TOPIC II: The Problem of Access: Who Can't Go to Graduate School and Who Should

1. Efforts at recruiting able minority people and women to graduate faculties and student bodies should be intensified by every possible means.

2. The distribution of fellowship funds and other forms of financial aid, as well as attempts to secure new funds, should reflect the determination of graduate institutions to correct earlier biases in admissions policy.

3. Assessments of capacity to pursue graduate work should be based on examination of all relevant information, including evidence concerning motivation and previous on-the-job achievements, and the practice of setting arbitrary cutoff points based on any index of ability should cease.

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4. Course sequences, residence regulations, and other institutional requirements should be adapted to meet the needs of students with family responsibilities, adult learners, professionals, those forced to pursue their studies intermittently, and others whose admission to graduate education and preferred patterns of study differ from those regarded as standard.

5. Graduate departments should seek by all possible means to open up effective communication with extension divisions. There should be counseling about cirricular offerings and full information provided about the meaning of extension credit, and the differences between extension and regular degrees.

TOPIC III: Nonacademic Experience as a Resource for Learning and Teaching

1. Graduate departments should develop nondegree learning sequences to supplement regular degree programs, and should propose admissions mechanisms that would permit mature professionals to reenter graduate education, in a second or new vocational area, on a special basis.

2. Graduate departments should develop ongoing, technical consultative panels composed of successful, nonuniversity-based doers in fields allied to the disciplines; these panels should meet regularly with the instructional staff for the purpose of providing suggestions concerning curricula, evaluative criteria-all matters related to advanced training.

3. Experts possessing career achievements in problem-solving should be appointed to graduate faculties, whether or not they can present the usual academic qualifications.

4. Support should be sought for an interinstitutional commission to develop techniques for establishing advanced placement and other equivalencies, at the graduate level, for work experience, and to serve as a permanent evaluative agency for such experience.

TOPIC IV: Alienation in the Student-Faculty Community

1. In every discipline, and especially at the Ph.D. level, graduate training should include, for all candidates who do not already possess such experience, a deliberate and significant component of discipline-related work outside the university walls.

2. In every discipline, joint, elected, student-faculty committees should be created for the purpose of maintaining a dialogue on matters of common interest, including requirements for the degree and decisions about departmental research emphases and budget priorities.

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3. Administrative authorities and faculty members in a position to do so should seek by every available means to strengthen a view of advanced study as a cooperative, learning-research, problem-solving venture in which students and faculty contribute interdependently as adults engaged in pursuits essential to the future of human society.

TOPIC V: Inequities and Omissions in the Reward System

1. University deans and department chairmen, working with faculty members, should make a detailed inventory of all faculty activities considered worthy of pursuit. Following completion of the inventory, the same authorities should develop standards for the evaluation of the activities, each considered as an independent enterprise. Thereafter these academic leaders should see to it that assessments of faculty for tenure, promotion, and salary increments are no longer based on the single criterion of research and publication but reflect a scrupulous and critical survey of the quality of performance in these other legitimate forms of intellectual enterprise.

2. When a faculty member, in submitting evidence of accomplishment, cites participation in a community venture, salary and tenure reviewers should accept evaluation of the performance by the teacher's colleagues, both academic and non-academic, in the undertaking in question.

3. The broader-ranging scales of assessment implied in Recommendations 1 and 2 above should be publicly circulated, so that every faculty member will know in advance what weight an oncampus or offcampus obligation carried when faculty distinction is assessed and the terms in which distinction is to be measured.

TOPIC VI: The Use of New and Neglected Media

1. Graduate institutions should encourage research and innovation in the field of education. There is particular need for research in the teaching/learning process and the proper use of emerging technological aids for instruction.

2. Wherever high-quality, new media make it feasible, department chairmen should seek reductions in graduate-level lecture courses and increases in graduate seminars and research colloquia.

3. Every graduate institution, regardless of its chosen mission, should explore new instructional materials and conduct faculty and student workshops in the uses and possibilities of the emerging technologies.

MORE (OVER)

TOPIC VII: Toward a New Conception of Subject Matter

1. Especially in research-oriented institutions, discipline-based seminars on essential subject matter should be created every three to five years. The function of these seminars should be to examine prevailing methodologies of teaching, to probe neglected areas of social reference and the broader points of the discipline as they are presently understood. In addition to graduate faculty and students, participants in the seminar should include experts from outside the university, prospective employers of degree candidates within the program of study, and selected members of the technical panels for the discipline (see Topic III, Recommendation 2).

2. Professional associations, particularly in the humanities, should periodically appoint blueribbon committees of inquiry charged with the task of scrutinizing current academic understandings of the social uses and provenance of the major disciplines. These committees should be composed of outstanding scholars and of professionals functioning inside and outside the academy.

TOPIC VIII: Insuring Viable Futures

1. Administrators and faculty at each institution should undertake now to create and fund permanent long-range planning groups to develop, through research, consultation, and other broadbased inquiry means of insuring successful institutional adaptation to environmental change.

2. With the aid of the planning groups, departmental chairmen should prepare periodic reports on all discipline-related information vital to effective long-range planning.

3. By interinstitutional discussion among the above planning groups about social and technological choices, and through interdisciplinary task forces engaged in future-oriented policy studies, universities should press for the development of ways in which advanced intelligence within graduate institutions can contribute to the design of viable communities for the future.

MORE

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